



Dr. Nishith Gupta

Doctor

Institute of Biology, Humboldt University, Germany

Dr. Nishith Gupta is a Heisenberg Research Group Leader at the Institute of Biology, Humboldt-University of Berlin, Germany. He did his Master of Science in Biotechnology from Banaras Hindu University India, and subsequently finished his PhD in Biochemistry from University of Leipzig Germany followed by a postdoctoral training at the National Jewish medical Research Centre in Denver USA. He is a recipient of several honours including Carl-Rudophi Medal from the German Society of Parasitology, Young Scientist Award in Microbiology from Robert Koch Foundation and Heisenberg Program Award from the German Research Foundation.

His group studies the survival strategies of a eukaryotic cell inhabiting another eukaryotic cell. Specifically, he has been investigating the metabolic interactions between intracellular parasites (namely *Toxoplasma*, *Eimeria*, *Plasmodium*) and mammalian host cells. The main objectives are to reveal the metabolic determinants and signaling mediators that underlie successful reproduction, adaptation and pathogenesis of these pathogens. His group has also pioneered the application of optogenetics in entwined models, particularly to study the cyclic nucleotides and calcium signaling in intracellular pathogens. Yet another thrust area of research in his group is to understand the evolution and quintessence of Warburg-like effect in parasitic protists. A topical extension of this work has led him to a new dogma whether parasites may exhibit cancer-like phenotype, or inversely, whether we can envisage cancer cells (at least some transmissible ones) as being new parasitic species. A nascent project in his group aims to nurture this idea further to eventually bridge the disciplines of parasitology and tumor biology.